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EXAMINER	
KASRAIAN, ALLAHYAR	
ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/614,803	BUSI ET AL.	
	Examiner	Art Unit	
	Allahyar Kasraian	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,7-9 and 12-15* is/are rejected.

7)☒ Claim(s) *5,6,10 and 11* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/ are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Art Unit - Location

1. The Art Unit location of this application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.

Remarks

2. The present Office Action is in response to Applicant's amendment filed on 12/05/2007. **Claims 1-15** are now pending in the present application. **This Action is made FINAL.**

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims **1, 2, 7-9 and 12-15** are rejected under 35 U.S.C. 102(e) as being anticipated by **Bannai et al. (U.S. Pub. # 2003/0208525 A1)** (hereafter Bannai).

Consider **claims 1 and 8**, Bannai clearly shows and discloses a method and a telecommunication transmission network for end-to-end connection between a first client layer connected to a Resilient Packet Ring (RPR) network and a second client layer connected to a Multi Protocol Label Switching (MPLS) network, the method network comprising:

interconnecting the RPR network (see FIG. 2 for a member of domain A connected to node 108 on RPR network 102) and the MPLS network (see FIG. 2 for any member of domain a connected to networks 202, 212 or 214) through a Transparent LAN Service (TLS) layer (see FIGs. 5, 6, 7B and lines 7-13 of paragraph 0046 ; FIG. 1 and paragraph 0026, "Multiple transparent LAN services (TLS) domains, such as domains A and B may *co-exist* on the ring 102... each TLS domain has an associated multicast MPLS label..."; paragraph 0030).

Consider **claims 2 and 9 as applied to claims 1 and 8 above respectively**, Bannai clearly shows and discloses the RPR network and the MPLS network are further interconnected through an interface consisting in a physical layer: wherein the physical layer is at least one of a Synchronous Digital Hierarchy (SDH), Synchronous Optical Networking (SONET), and an Ethernet (see FIG. 3, FIG. 4, lines 3-8 of paragraph 0035, "The ring interface cards 330 and 332 convert the incoming optical signals on fiber optic cables 334 and 336 to electrical digital signals for application to switching card 338. In one embodiment, the ring interface cards 330, 332 may be implemented as a singe card." It is inherently taught SDH or SONET physical layer is interface 330 and 332 that

converts optical signals to electrical digital signals; and lines 1-4 of paragraph 0028, "Each of the nodes 104-110 may include physical ports, such as Ethernet and Gigabit Ethernet ports. These physical ports may be configured to be a part of any of the domains A, B of the ring 102.").

Consider **claim 7 as applied to claim 1 above**, Bannai clearly shows and discloses client layer is one of an Ethernet layer and an Internet Protocol (IP) layer. (see FIG. 3 and Fig. 4 and lines 1-4 of paragraph 0028, "Each of the nodes 104-110 may include physical ports, such as Ethernet and Gigabit Ethernet ports. These physical ports may be configured to be a part of any of the domains A, B of the ring 102.").

Consider **claims 12-13 and 14-15 as applied to claims 1 and 8 above respectively**, a computer readable medium having a program recorded thereon, said computer readable medium comprising computer program code means adapted to perform all the steps of claims 1 and 8 when said program is run on a computer that is inherently taught by Bannai et al. since some kind of memory is required to store the operating instructions for the system and for execution of the method.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims **3-4** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bannai et al. (U.S. Pub. # 2003/0208525 A1)**.

Consider **claim 3 as applied to claim 1 above**, Bannai did not explicitly disclose a method for sending a packet in the direction from RPR to MPLS or MPLS to RPR.

However, Bannai provides a clear suggestion for performing the claim steps when they disclose sending and receiving a TLS packet in combined MPLS and RPR networks by forming a ring packet as illustrated in FIG. 5 and FIG. 7B (as described on lines 7-10 of paragraph 0046, where it says, "the TLS microcode 422 (see FIG. 4) appends the service header 506, a multicast MPLS label 710 and a ring header 712 to the incoming packet 700 ... to form a ring packet 720.")

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the teaching method of Bannai in order to route client frames in the direction from RPR to MPLS or from MPLS to RPR networks efficiently.

Consider **claim 4 as applied to claim 3 above**, Bannai clearly shows and discloses an auxiliary TLS Header is added to said received client frames, obtaining said TLS packets (see Service Header 506 in FIG. 5, and lines 1-4 of paragraph 0031, where it says, "A transmitted data packet from one of the nodes... may also include a service header. The service header is generally used to communicate service level parameters..."); then an RPR Header is added to said TLS packets, obtaining said RPR packets (see FIG. 5, 7B, and 7C), and in that said TLS Header contains a channel identifier field, identifying the connection between the client layer connected to the RPR network (see FIG. 6, TTL field 616, and lines 5-7 of paragraph 0055, where it says, "The

TTL filed maybe 8 bits long and may be replaced with a hash ID of a ring card of the source node") and the client layer connected to the MPLS network (see FIG. 6, unicast label filed 608, and lines 1-2, where it says, "The unicast label filed 608 is used by the TLS service to indicate the source MPLS label..."), said TLS Header further containing Reserved bits (see FIG. 6, Unused filed 606) and Error correction bits (see FIG. 7A, and lines 7-8, where it says, "The incoming packet 700 may also include cyclic redundancy code...").

Allowable Subject Matter

7. Claims **5-6 and 10-11** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed 12/05/2007 have been fully considered but they are not persuasive.

On page 7 of the Applicant's arguments and remarks, the first paragraph, Applicant argues that there is no teaching or suggestion of realizing an end-to-end connection between a client layer connected to a Resilient Packet Ring (RPR) network and a client layer connected to a Multi Protocol Label Switching (MPLS) network. Applicant further requests the Examiner to identify where the claimed Resilient Packet

Ring (RPR) network and the claimed Multi Protocol Label Switching (MPLS) network is disclosed in the Bannai reference.

Examiner disagrees with the Applicant's arguments with regards to the broadest interpretation of the body of the independent claims 1 and 8, refers again to par. 0026 of Bannai, "Multiple transparent LAN services (TLS) domains, such as domains A and B may **co-exist** on the ring 102... each TLS domain has an associated multicast MPLS label", and par. 0030, "an endpoint device... of domain A may send a data packet to another endpoint device of domain A using multicast MPLS (Multi Protocol Label Switching) protocol." Examiner notes that any person of ordinary skills in the art should realize that any network using MPLS protocol is considered as MPLS network. Because Bannai does not disclose a separated MPLS network, it does not mean that the MPLS network does not exist. The MPLS network could be located at any of the domains since they use multicast MPLS label, and the MPLS network is connected to the RPR network (FIG. 1 or 2 ring network 102) through a TLS layer (see FIGs. 7A and 7B and par. 0044-0046).

With regards to the Applicant's argument on the second paragraph of page 7, indicating there in no teaching or suggestion of interconnecting the RPR network and the MPLS network through a TLS layer, Examiner respectfully disagrees and refers to the same reason stated above.

On the second paragraph of page 8 of the Applicant's arguments and remarks, Applicants argues, "ring networks 212, 214 and 102 appear to be of a same kind of network. There is no teaching or suggestion that ring networks 212, 214 and 102 are of

different kinds of networks. Specifically, there is no teaching or suggestion that one of ring networks 212, 214 and 102 is an RPR network while another one of ring networks 212, 214 and 102 is a MPLS network. See para. [0025]. Bannai merely discloses the application of an MPLS protocol and does not disclose and MPLS network, as claimed."

Examiner respectfully disagrees and stands with the pervious interpretation of FIG. 2 and notes that if we do not consider rings networks 212 and 214 as MPLS networks in view of ring network 102, then there should be a network protocol between the three ring networks (at any point between the three rings such as WAN 202); otherwise there is no interconnection between domains A's or B's. Obviously, the WAN is not part of the ring networks, but as Bannai discloses, it could be considered as part of the MPLS network since the transmission of data from one ring to another are associated with labels, "the multicast label may used to send data to the various ports of the various nodes belonging to the domain associated with multicast label" (see par. 0026). And again, using MPLS protocol means the type of network is defined as an MPLS network. Therefore, Bannai discloses interconnecting an RPR network and an MPLS network through a TLS layer.

On the third paragraph of page 8 of the Applicant's arguments and remarks, with regards to FIG. 4 Applicants argues, "the node 108 is a component of the ring 102, which the Examiner is citing for teaching the claims RPR network. As node 108 is a component of ring 102 which is being cited for teaching the claimed RPR network, Applicant submits that the node 108 cannot consequently disclose an MPLS network."

Examiner agrees with Applicant that node 108 is part of the ring 102; however, node 108 is an interface that connect an MPLS network and RPR network trough TLS manger and microcode. As shown in FIG. 4, there are a multicast MPLS client 412 and a ring card application 408 that are used to connect two networks together through TLS manager 414 and TLS Microcode 432 (see par. 0040-0041 and 0050).

On page 9 and 10 of the Applicant's arguments and remarks, for claim rejections under 35 U.S.C 103, Applicant argues that Bannai is not at all concerned with interconnecting the RPR network and the MPLS network and modifying Bannai to teach the claimed elements would not be obvious to one skill in the art. Examiner respectfully disagrees and refers to the same reason(s) states above and for that reasons, the modifying is reasonable and obvious to one skill in the art.

On page 10, the second and third paragraphs, Applicant argues, "the Examiner asserts that para. [0046] of Bannai...However, there is no teaching or suggestion regarding the transmission of packets in the direction from an RPR network to and MPLS network and vice versa, let alone any discussion regarding the encapsulation and switching of packets until reaching a final destination". Examiner respectfully disagrees and refers to the pervious office actions. Examiner quoted and addressed the exact part of par. 0046 to regarding the encapsulation and switching the packet with respect to FIGs. 4, 5, 7A and 7B to form a packet to transit from the MPLS to ring network and vise versa. Therefore, Bannai discloses the transmission of packets in the direction from an RPR network and an MPLS network and vise versa. For that reason the dependent claims 3 and 4 are rejected.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

11. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Allahyar Kasraian whose telephone number is (571) 270-1772. The Examiner can normally be reached on Monday-Thursday from 8:00 a.m. to 5:00 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Rafael Pérez-Gutiérrez can be reached on (571) 272-7915. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Allahyar Kasraian
A.K./ak

February 19, 2008

Rafael Perez-Gutierrez
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2/19/08